

## AMENDMENTS TO THE CLAIMS

38.(currently amended): An optical disc recording/retrieving apparatus comprising:

a motor for rotating disc, which has a spiral groove with wobble ~~which~~ whose carrier frequency is constant in space ~~frequency~~ frequency and ~~meandering is meandered~~ according to a signal modulated with a constant carrier frequency  $F_{L0}$   $f_{L0}$  and address information and also has a recording layer, at a constant angular velocity with a center of the disc being an axis of rotation, the disc having address information identifying each recording data block, which is a unit of recording information located at a specified position in the spiral groove, and a synchronization pattern identifying a head position of the recording data block ;

an optical pick-up for generating a focused laser beam irradiating the disc for recording/retrieving;

linear motor for moving said optical pick-up radially of the disc to a given address;

a focus servo circuit for focusing the focused laser beam on the recording layer;

groove tracking servo circuit for scanning the spiral groove by the focused laser beam;

a detector and decoder circuit for detecting and decoding a carrier frequency  $f_{A0}$ , address information and block synchronization signal from the meandering groove geometry;

a data-sequence generation circuit for generating a recording data sequence, which is modulated in terms of mark length modulation, in synchronism with a data reference clock T which has a frequency  $f_{d0}$  and with a start position of the recording block;

a laser-power modulation circuit for modulating a recording laser power in accordance with the recording data sequence;

a reference signal generator for generating a data reference clock T which varies in reverse proportion to a radius position when the focused laser beam is moved radially of the disc to a given address of a recording data block; and

a data-sequence synchronization circuit for synchronizing a data sequence, which is to be written in the given recording block, with the start position of the recording block and also making a fine adjustment of r.p.m. (revolutions per minute) of the disc so as to satisfy a relation  $f_{d0} = N f_{A0}$  at any radius position, by comparing in phase between a reference signal  $f_{R0}$ , which is obtained by dividing the data reference clock frequency  $f_{d0}$  at a particular radius by N (N is an integer), and the carrier frequency  $f_{A0}$  which is detected at the given address from the meandering groove geometry, ~~and also making a fine adjustment of r.p.m. (revolutions per minute) of the disc so as to satisfy a relation  $f_{d0} = N f_{A0}$ .~~

39.(currently amended): An optical disc recording/retrieving apparatus according to claim 38, wherein the frequency  $f_{d0}$  of the reference clock T at a particular address is varied according to the radius so as to satisfy a relation:

$$f_{d0} = f_{ref} + (R - R_{ref}) \Delta R$$

where  $f_{ref}$  is the frequency of a data reference clock  $T_{ref}$  ~~for~~ at a reference radius  $R_{ref}$  ~~at~~ of the head or tail of the recording area of the optical disc, ~~AR~~  $\Delta R$  is a radial width of the recording medium from an innermost periphery to an outermost periphery of the recording area, and R is a radius calculated from a given address at which object data is to be recorded.

40.(original): An optical disc recording/retrieving apparatus according to claim 38, wherein within a range in which r.p.m. of the disc is adjusted is within  $\pm 0.01 \omega_0$  with respect to a reference r.p.m.  $\omega_0$ .

41.(currently amended): An optical disc recording/retrieving apparatus according to claim 38, wherein the carrier frequency  $f_{L0}$  of the ~~flower~~ groove geometry is 22.05 kHz, the address information is an ATIP (absolute time in pre-groove) signal whose frequency is modulated by  $\pm 1$  kHz with the carrier frequency  $f_{L0}$  and  $\omega_0$  is within a range of from 1900 to 2200 r.p.m.